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EXAMINER

STEELMAN, MARY J

ART UNIT	PAPER NUMBER
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2191

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,363

Applicant(s)

MATHEWS, JOHN

Examiner

Mary J. Steelman

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to Amendment and Remarks received 29 November 2004. Per Applicant's request, claims 1, 17, 32, and 48 are amended. Claims 1-48 are pending.

Specification

2. In view of the amendment to the Abstract, the prior objection is hereby withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-7, 15, 21-23, 31, 36, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 5, 15, 21, 31, 36, and 46, the terms 'substantially' and 'essentially' are relative terms which renders the claim indefinite. The terms "substantially" and "essentially" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Examiner disagrees with Applicant's argument regarding the definiteness of claim language.

The terms "substantially" and "essentially" are indefinite because they imply that a feature that is not limited to what is claimed. As an example: Claim 5 recites... "to provide substantially real-time test results...", but could also be understood that it may provide some degree of test results that may or may not be real time. Examiner maintains the 35 USC 112 second paragraph

Art Unit: 2191

rejection. Claims will be examiner as if the words “substantially” and “essentially” were not included.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4, 8-18, 20, 24-33, 35, 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,600,789 to Parker et al., in view of US Patent 5,909,544 to Anderson, II et al.

Per claims 1, 17, and 32:

-system; method; software being embodied in computer-readable media;

(Parker: FIGs. 4 & 15, Col. 10, line 23, “GUI system under test:)

-centralized test queue operable to store a plurality of software GUI test instances to be executed by a plurality of distributed test execution computers;

(Parker: Col. 1, lines 6-8, “...an apparatus and method for automatically testing Graphical User Interfaces of computer systems”, Col. 5, lines 16-62, “...tests and testing benchmarks are

Art Unit: 2191

portable between platforms...”, col. 33, lines 41-58, “The test script (a queue of tests) of the present invention can run on the same or on a different machine than the test driver or drivers being used at any one time....test script....test executive...test driver, and application and GUI... The same test script is thus able to drive different GUIs on 2 different machines...”, col. 33, lines 65-66, “...a given test executive can drive multiple targets simultaneously in a coordinated way...”, FIG. 13 – plurality of platforms, FIG. 15 -, plurality of testing.)

-a test server engine operable to, for each distributed test execution computer:

(Parker: FIG. 3, #100, col. 8, lines 30-31, “the test executive and the test driver are collectively known as the test tool”, col. 8, line 4, “If the application being tested is a distributed system (distributed test execution computer), col. 8, lines 37-40, “The test executive passes the GUI specific command to the test driver. The test driver then performs the actual action on the GUI object specified in the test script...” Thus Parker disclosed a distributed test system, where the ‘test server engine’ is represented as a ‘test tool’ comprising a ‘test executive’ and an ‘test driver’.

-receive a request for a software GUI test instance from a particular distributed test execution computer in response to completion of a preceding software GUI test instance by the particular distributed test execution computer;

(Parker: Col. 4, lines 44-46, “If the test was successful, the test executive continues to execute the next step in the script (receives a request for next instance in queue) , and proceeds in this

Art Unit: 2191

manner (in response to completion of a preceding software GUI test instance) until the test is complete.”)

-retrieve a software GUI test instance from the test queue in response to the request from the particular distributed test execution computer;

(Parker: Col. 4, lines 13-15, “The function of the test driver is to take the GUI specific references from the test executive and perform the actual interface (retrieve, in response to request) to the GUI objects.”)

-communicate the retrieved software GUI test instance to the particular distributed test execution computer for execution against a particular client-server combination using a testing component supported by the particular distributed test execution computer, the testing component operable to perform automated software GUI testing and to produce test results for such testing for communication to the test server engine;

(Parker: FIG. 4, Col. 8, lines 37-40, “The test executive passes the GUI specific command to the test driver. The test driver then performs the actual action of the GUI object specified in the test script command.”, col. 9, lines 58-61, “...command coded into test scripts will place text into the same logical application object across different GUI platforms without requiring modification to the command in the script”, col. 15, lines 33-39, “The user input or series of inputs are transmitted from the test driver to the GUI on interface. The test driver functions are specified in

Art Unit: 2191

the test script at a superclass, logical, generic level”, col. 15, lines 60-62, “The test driver then transmits the generated user input actions to the GUI thus simulating real user’s input... performs the requested action...”, col. 33, lines 51-58, “The interface can be... a network connection. The same test script... is... able to drive 3 different GUIs on 2 different machines... a given test executive can drive multiple targets simultaneously in a coordinated way...”, col. 31, lines 11-18, “A hypertext-like viewer could be used to view the results (produce results).)

-receive a test result for the software GUI test instance from the particular distributed test execution computer in response to execution of the software GUI test instance;

(Parker: Col. 30, lines 49-51, “When a script of group of scripts are executed, a single results file is created which stores all information pertinent to the execution.”)

-store the received test result for reporting to one or more users.

(Parker: Col. 31, lines 11-18, “A hypertext-like viewer could be used to view the results file... one would see the scripts which executed and how many errors there were. If a script was selected, one would see the test cases and how many error...”)

Parker failed to supply specific details regarding a “test queue” and “each distributed test execution computer comprising a client platform and coupled to one or more server platforms,

Art Unit: 2191

the client platforms and server platforms collectively providing a plurality of client-server combinations against which the software GUI test instances may be executed”.

However, Anderson disclosed an automated test harness. More specifically, Anderson disclosed, col. 5, lines 10-12, “the application being selected from a plurality of applications identified by the scheduler from the launch queue (test queue).” Parker disclosed a ‘plurality of client-server combinations’ (col. 12, lines 3-8), “The resources and controller may be connected to a server... The controller and resources (client platform) together with the server (server platform) may be configured in a variety of topologies (plurality of client-server combinations)...” Additionally Anderson specifically disclosed that a launcher (col. 7, lines 11-22) may communicate with a target (test machine). The target downloads selected tests to (col. 7, line 36) “automate the execution of software testing.” Anderson disclosed (col. 7, lines 53-54) “initiating downloading by the... target (test machine).

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention to include information regarding various network platform combinations in a GUI software test environment, including a test queue, as that allows for more fully testing of the software. Anderson recognized (col. 3, lines 42-50), “All this capability over network can make possible testing systems having great speed, throughput, and flexibility from an assembly of any number of available resources of virtually any type... human intervention may be only required at some minimal degree...” Thus the references show the state of art at the time of invention, which disclosed that various client server combinations may be automatically tested, using a test

Art Unit: 2191

queue, and test machine may initiate the downloading of tests in response to commands received by a launcher or otherwise a test driver may perform in response to commands.

Per claim 2, 18, and 33:

-at least one distributed test execution computer operates at a location geographically remote from the other distributed test execution computers and from the test server.

(Parker: FIG. 15 – distributed test execution.)

Per claims 4, 20, and 35:

-each software GUI test instance is an instance of a software GUI test written using a test scripting language and can be executed using any of the distributed test execution computers, a software GUI test instance being executed using the particular distributed test execution computer from which the request initiating retrieval of the software GUI test instance from the test queue was received.

(Parker: Col. 34, lines 4-6, “Since the test tool has test drivers for all of the popular GUIs, a given test script can drive not only multiple targets simultaneously, but multiple heterogeneous targets.”, Col. 4, lines 8-9, “The test executive executes the test script.”)

Per claims 8, 24, and 39:

-at least some GUI test instances in the test queue have associated priorities, the test server engine operable to retrieve the GUI test instances from the test queue for execution according to their associated priorities.

Art Unit: 2191

(Parker: Col. 4, lines 15-20, "...test executive and the test driver take the references...and translate them into a form...to identify, manipulate and query (retrieve according to priorities)...)

Per claims 9, 25, and 40:

-the test queue comprises a first queue containing higher priority software GUI test instances and a second queue containing lower priority software GUI test instances, the test server engine operable to retrieve higher priority software GUI test instances from the first queue for execution during a first part of a testing period and retrieve lower priority software GUI test instances from the second queue for execution during a second part of the testing period.

(Parker: Col. 4, lines 15-20, "...test executive and the test driver take the references...and translate them into a form...to identify, manipulate and query (retrieve according to priorities)...)

Parker does not specify "a first queue...a second queue...higher / lower priorities..."

However, he does disclose that the executive and drivers may identify, manipulate and query objects under test for the purposes of execution.

However, Anderson suggests a test queue and priorities. Col. 5, lines 1-2, "a scheduler for selecting a test...from a queue of tests...", col. 7, lines 18-22, "The controller may include a scheduler for acquiring data corresponding to a queue of tests to be run, selecting test applications to be loaded onto the target, and controlling matching of test applications to the target (prioritizing queues of tests).

Therefore it would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified Parker's invention to include variations of priorities during multiple test executions because he disclosed manipulations of the objects being tested, thus producing more varied tests. Anderson disclosed (col. 3, lines 2-6), "a need exists for autonomous devices to be temporarily accessed remotely with data for controlling...", (col. 1, lines 3-6), "for temporarily slaving operating systems of a plurality of processors for configuration purposes (automated remote testing of software) or for downloading software..." References describe the state of art at the time of the invention, and thus would be obvious to combine.

Per claims 10, 26, and 41:

-the test server engine is operable to re-communicate instances of a software GUI test for execution against all client-server combinations, according to a rule, in response to receiving one or more test results for the software GUI test indicating failure.

(Parker: Col. 4, lines 15-20, "...test executive and the test driver take the references...and translate them into a form...to identify, manipulate and query (retrieve according to priorities)...)

Parker does not specify "re-communicating instances of a test...in response to receiving results..." However, he does disclose that the executive and drivers may identify, manipulate (re-communicate instances) and query objects under test for the purposes of execution. He also disclosed, col. 4, lines 46-50, "If the test was not successful, the test executive can invoke an exception handler to decide how to proceed with the test (re-communicate instance of a test)..."

Art Unit: 2191

Therefore it would have been obvious, to one of ordinary skill in the art, at the time of the invention to have modified Parker's invention to include "to re-communicate instances of a software GUI test for execution against all client-server combinations, according to a rule, in response to receiving one or more test results for the software GUI test indicating failure", because he disclosed manipulations of the objects being tested, and error handling options, thus re-communicating instances for execution re-test would provide added assurance of results, allowing for parameter modifications.

Per claims 11, 27, and 42:

-the test server engine is operable to detect when the number of software GUI test instances in the test queue is below a predefined threshold and, in response, to automatically add software GUI test instances to the test queue.

(Parker: Col. 4, lines 1-5, "The first component is a test script which is written in a high level programming language and contains the user events to be simulated, and the control and data structures necessary (maintain predefined threshold) to validate the GUIs...")

Per claims 12, 28 and 43:

-a client controller associated with each distributed test execution computer and operable to automatically install a current software GUI build at each distributed test execution computer at one or more appropriate times during a testing period.

(Parker: FIG. 11, #692 & #682, Col. 26, line 27, "Changes to the user interface...(install current build)...", col. 26, lines 31-34, "The testing methodology provided by the present invention

Art Unit: 2191

allows the principles of software engineering to be applied to the testing of applications as well as to the development of such programs.”)

Per claims 13, 29, and 44:

-a client controller associated with each distributed test execution computer and operable automatically reboot each distributed test execution computer according to predetermined schedule.

(Parker: Col. 3, lines 60-61, “The present invention is directed at testing both new and revised computer application programs that use a Graphical User interface(GUI)...”, col. 4, line 4, “...control and data structures necessary to validate the GUIs...”, col. 16, lines 42-43, “System functions allow the test executive to perform operating system functions (reboot)...”)

Per claims 14, 30, and 45:

-a client controller associated with each distributed test execution computer and operable to establish communication with the test server engine when the distributed test execution computer boots up.

(Parker: Col. 4, lines 4-5, “...control and data structures necessary to validate the GUIs...”)

Per claims 15, 31, and 46:

-each test execution computer operates essentially as an automated test execution robot, repeatedly requesting, receiving, executing, and returning test results for software GUI test instances, automatically and without human intervention, for an extended time period.

Art Unit: 2191

(Parker: Col. 27, lines 15-29, "...test script is driven by data contained in a functional specification repository...", col. 27, lines 58-61, "On of the strengths of the present invention is the ability to use and re-use object data collected during a baseline execution..." Automatically repeating according to a functional specification, re-using data collected.)

Per claim 16:

-further comprising the distributed test execution computers.

(Parker: FIG. 15.)

Per claim 47:

A system for distributed automated software GUI testing, comprising:

(Parker: Col. 5, line 17, '...test system...')

-means for maintaining a centralized test queue operable to store a plurality of software GUI test instances to be executed by a plurality of distributed test execution computers, each distributed test execution computer comprising a client platform and coupled to one or more server platforms, the client platforms and server platforms collectively providing a plurality of client-server combinations against which the software GUI test instances may be executed;

-means for receiving a request for a software GUI test instance from each particular distributed test execution computer in response to completion of a preceding software GUI test instance by the distributed test execution computer;

-means for retrieving a software GUI test instance from the test queue in response to the request from the particular distributed test execution computer;

Art Unit: 2191

-means for communicating the retrieved software GUI test instance to the particular distributed test execution computer for execution against a particular client-server combination using a testing component supported by the particular distributed test execution computer, the testing component operable to perform automated software GUI testing and to produce test results for such testing;

-means for receiving a test result for the software GUI test instance from the particular distributed test execution computer in response to execution of the software GUI test instance;

-means for storing the received test result for reporting to one or more users.

(See limitations as addressed in claim 1 above.)

7. Claims 3, 5-7, 19, 21-23, 34, 36-38, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,600,789 to Parker et al., in view of US Patent 5,909,544 to Anderson, II et al., and further in view of US Patent 6,766,481 B2 to Estep et al.

Per claims 3, 19, and 34:

Parker / Anderson combination fails to address:

-the testing component is a commercial off-the-shelf product.

However, Estep, disclosed a software testing system. At col. 3, lines 36-39, Estep disclosed, "gathers the appropriate commercial off-the-shelf (COTS) software products for testing..."

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified Parkers GUI testing to include commercial off the shelf software

Art Unit: 2191

as it is well known in the art, and an effective reuse of software, thereby saving time and money in software development. Parker disclosed a system to test computer systems (col. 1, line 1).

Parker recognized the need for automated testing (col. 3, lines 46-56), portable test suites for application development. Estep disclosed a need (col. 1, lines 55-60) “for providing users with the necessary data to readily determine whether a particular piece of software will perform a specific function...” by providing (col. 1, lines 1-2) “systems and processes for testing and evaluating software.” Thus there is motivation to combine the references.

Per claims 5, 21, and 36:

Parker/Anderson generated test results for a plurality of software GUI test instances and results were generated (Parker: col. 3, lines 60-65, “...automatically generates inputs to the GUI which simulate user events...and then observes the changes...in response to the input”, col. 14, lines 52, “reports an error to the test executive”), but failed to disclose limitations related to ‘generating a test results web page’, ‘communicate the test results web page for display on a user system to provide...real-time test results reporting.’

However, Estep disclosed:

...generate a test results web page comprising test results...including the test result for the most recently executed software...upon receiving the test result from the particular distributed test execution computer on which the most recently executed software GUI test instance was executed;

Art Unit: 2191

Estep: Col. 1, line 61-col. 2, line 1, "...software suitability testing (plurality of software GUI test instances)...tests software products to determine the software's capabilities", col. 2, lines 43-47, "it provides users with data, resulting from the testing process, that allows users to readily (results quickly provided) determine whether a particular piece of software (or a particular software product) will perform a specific function...", col. 3, line 66-col. 4, line 2, "All finalized reports re posted on a global computer network (generate a test results web page comprising test results...including most recently executed software)..."

-the system further comprises a web server operable to communicate the test results web page for display on a user system to provide substantially real-time test results reporting.

Estep: Col. 13, lines 47-57, "The final STR (suitability test report) is posted on the Web using well known and conventional Web design and implementation techniques...It would be readily apparent to one of ordinary skill in the relevant art to post the final STR on the Web and make a comparison of two or more final STRs."

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to have modified Parker /Anderson test executive to produce test results on a web page, as this is a well known manner to publish information, effectively and inexpensively providing real time details to customers. Parker / Anderson disclosed a system to test computer systems (Parker: col. 1, line 1). Parker / Anderson recognized the need for automated testing (Parker: col. 3, lines 46-56), portable test suites for application development. Estep disclosed a need (Estep: col. 1, lines 55-60) "for providing users with the necessary data to readily determine

Art Unit: 2191

whether a particular piece of software will perform a specific function...” by providing (Estep: col. 1, lines 1-17) “systems and processes for testing and evaluating software...and presenting decision making information in an interactive web-based repository.” Thus there is motivation to combine the references.

Per claims 6, 22 and 37:

-each software GUI test instance is an instance of a software GUI test;

(Parker: Col. 4, lines 13-20, “The function of the test drives is to take the GUI specific references from the test executive and perform the actual interface to the GUI objects. At the time of execution of the test script, the test executive and the test driver take the references to the logical objects contained in the script and translate them...to identify, manipulate and query the actual objects under test...)

-the test results web page comprises consolidated test results for a particular client platform, the consolidated test results indicating test results for each software GUI test for each client-server combination involving the particular client platform.

(Estep provided details regarding posting results to a web page (col. 3, lines 66- col. 4, col. 13, lines 47-57).

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the Parker/ Anderson test executive to produce test results on a web page, as this is a well known manner to publish information, effectively and inexpensively providing real time details to customers. Parker disclosed a system to test computer systems

Art Unit: 2191

(col. 1, line 1). Parker recognized the need for automated testing (col. 3, lines 46-56), portable test suites for application development. Estep disclosed a need (col. 1, lines 55-60) “for providing users with the necessary data to readily determine whether a particular piece of software will perform a specific function...” by providing (col. 1, lines 1-17) “systems and processes for testing and evaluating software...and presenting decision making information in an interactive web-based repository.” Thus there is motivation to combine the references.

Per claims 7, 23, and 38:

Parker/ Anderson disclosed an invention whereby a test script is provided to execute desired features of a GUI. Parker/Anderson failed to disclose test selections via a results web page: -the test server engine is further operable to receive a user request to execute an instance of a particular software GUI test and to insert the requested software GUI test instance into the test queue according to the user request, the user request being input by selecting the particular software GUI test using the test results web page.

However, Estep provided details regarding posting results to a web page (col. 3, lines 66-col. 4).

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify the Parker/Anderson test executive to produce test results on a web page, as this is a well known manner to publish information, effectively and inexpensively providing real time details to customers. Parker disclosed a system to test computer systems (col. 1, line 1). Parker recognized the need for automated testing (col. 3, lines 46-56), portable test suites for application development. Estep disclosed a need (col. 1, lines 55-60) “for

Art Unit: 2191

providing users with the necessary data to readily determine whether a particular piece of software will perform a specific function..." by providing (col. 1, lines 1-17) "systems and processes for testing and evaluating software...and presenting decision making information in an interactive web-based repository." Thus there is motivation to combine the references.

Per claim 48:

A system for distributed automated software graphical user interface (GUI) testing, comprising:

- a centralized test queue operable to store a plurality of software GUI test instances to be executed by a plurality of distributed test execution computers, each distributed test execution computer comprising a client platform and coupled to one or more server platforms, the client platforms and server platforms collectively providing a plurality of client-server combinations against which the software GUI test instances may be executed, each software GUI test instance is an instance of a software GUI test written using a test scripting language and executable using any of the distributed test execution computers;
- a test server engine operable to, for each distributed test execution computer:
 - receive a request for a software GUI test instance from the particular distributed test execution computer in response to completion of a preceding software GUI test instance by the particular distributed test execution computer;
 - retrieve a software GUI test instance from the test queue in response to the request from the particular distributed test execution computer;

Art Unit: 2191

-communicate the retrieved software GUI test instance to the particular distributed test execution computer for execution against a particular client-server combination using a testing component supported by the particular distributed test execution computer, the testing component operable to perform automated software GUI testing and to produce test results for such testing for communication to the test server engine, a software GUI test being executed using the particular distributed test execution computer from which the request initiating retrieval of the software GUI test from the test queue was received;

-receive a test result for the software GUI test instance from the particular distributed test execution computer in response to execution of the software GUI test instance;

-store the received test result for reporting to one or more users in a test results database;

-generate a test results web page comprising the test results for the plurality of software GUI test instances.

-each distributed test execution computer operating essentially as an automated test execution robot, repeatedly requesting, receiving, executing, and returning results for software GUI test instances automatically without human intervention for extended periods of time;

-a web server operable to:

-access the test results database to obtain test results for a plurality of software GUI test instances;

-communicate the test results web page for display on a user system to provide substantially real-time test results reporting.

(See limitations as addressed in claims 1, 4, 5, and 15 above.)

Response to Arguments

8. Applicant has argued, in substance, the following:

(A) As Applicant has pointed out on page 19 of Remarks, 3rd paragraph, submitted 29 November 2004, "Parker fails to suggest a centralized test queue operable to store a plurality of software GUI test instances to be executed by a plurality of distributed test execution computers."

Examiner's Response: Parker disclosed 'test scripts'. See FIG. 4. Test scripts provide a queue of tests to be executed. See rejection of limitations in claim 1 above.

(B) As Applicant has pointed out on page 21, last paragraph, "Parker fails to disclose a test server engine operable to receive a request for a software GUI test instance..."

Examiner's Response:

Parker disclosed a test tool comprising a test driver and test executive. See FIG. 4. Parker disclosed that the test could be done in a distributed environment. Thus the Test tool acts as a 'test server engine'. See rejection of limitation in claim 1 above.

(C) As Applicant has pointed out on page 22, 2nd paragraph, "Parker fails to disclose a test server engine operable to retrieve a software GUI test instance from the test queue..."

Art Unit: 2191

Examiner's Response: Parker disclosed a test tool comprising a test driver and test executive.

See FIG. 4. Parker disclosed that the test could be done in a distributed environment. Thus the Test tool acts as a 'test server engine'. See rejection of limitation in claim 1 above.

(D) As Applicant has pointed out on page 19, 3rd paragraph, and similarly on pages 23-28, the Parker / Estep combination is improper.

Examiner's Response:

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Parker disclosed a system to test computer systems (col. 1, line 1). Parker recognized the need for automated testing (col. 3, lines 46-56), portable test suites for application development. Estep disclosed a need (col. 1, lines 55-60) "for providing users with the necessary data to readily determine whether a particular piece of software will perform a specific function..." by providing (col. 1, lines 1-2) "systems and processes for testing and evaluating software." Thus there is motivation to combine the references.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on

Art Unit: 2191

obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (571) 272-3704. The

Art Unit: 2191

examiner can normally be reached Monday through Thursday, from 7:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached at (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Steelman

04/28/2005



TUAN DAM
SUPERVISORY PATENT EXAMINER